Conversion factors

See http://www.ex.ac.uk/cimt/dictunit/dictunit.htm for further discussion and additional links. Conversions listed below are exact unless otherwise stated.

Length:

$1\,\text{in} = 2.54\,\text{cm}; \quad 1\,\text{ft} = 12\,\text{in} = 0.3048\,\text{m}; \quad 1\,\text{mi} = 1760\,\text{yd} = 5280\,\text{ft} = 1609.344\,\text{m}.$

Time:

$1\,\text{h} = 60\ \text{min} = 3600\,\text{s}.$

Mass:

$1\,\text{lbm}^* = 0.45359237\,\text{kg}; \quad 1\,\text{slug} = (9.80665/0.3048)\,\text{lbm} = (4.4482216152605/0.3048)\,\text{kg};$
$1\,\text{u} = (1.66053873 \pm 0.00000013) \times 10^{-27}\,\text{kg}$ (not exact).

Angle:

$1\,\text{rev} = 360° = 2\pi\,\text{rad}.$

Speed:

$1\,\text{mi/h} = 1.609344\,\text{km/h} = 0.44704\,\text{m/s} = (22/15)\,\text{ft/s}.$

Force:

$1\,\text{kgf}^* = 9.80665\,\text{N}; \quad 1\,\text{lb} = 0.45359237\,\text{kgf} = 4.4482216152605\,\text{N}.$

Energy:

$1\,\text{ft lb} = 1.3558179483314004\,\text{J}; \quad 1\,\text{kWh} = 3.6 \times 10^6\,\text{J}; \quad 1\,\text{cal(IT)} = 4.1868\,\text{J};$
$1\,\text{Btu(IT)} = 1055.05585262\,\text{J}; \quad 1\,\text{eV} = (1.602176462 \pm 0.000000063) \times 10^{-19}\,\text{J}$ (not exact).

Power:

$1\,\text{ft lb/s} = 1.3558179483314004\,\text{W}; \quad 1\,\text{hp(electric)} = 746\,\text{W}.$

Pressure:

$1\,\text{lb/in}^2 = (4448.2216152605/0.64516)\,\text{Pa}; \quad 1\,\text{atm} = 760\,\text{torr} = 101325\,\text{Pa} = 1.01325\,\text{bar};$
$1\,\text{atm} = (6.5370837/0.44482216152605)\,\text{lb/in}^2.$

Volume:

$1\,\text{liter} = 10^{-3}\,\text{m}^3 = 1000\,\text{cm}^3; \quad 1\,\text{gallon(US-liquid)} = 3.785411784\,\text{liter}.$

Standard prefixes denoting powers of 10:

Prefix	Symbol	Factor	Prefix	Symbol	Factor
deca-	da	10^1	deci-	d	10^{-1}
hecto-	h	10^2	centi-	c	10^{-2}
kilo-	k	10^3	milli-	m	10^{-3}
mega-	M	10^6	micro-	μ	10^{-6}
giga-	G	10^9	nano-	n	10^{-9}
tera-	T	10^{12}	pico-	p	10^{-12}
peta-	P	10^{15}	femto-	f	10^{-15}
exa-	E	10^{18}	atto-	a	10^{-18}
zetta-	Z	10^{21}	zepto-	z	10^{-21}
yotta-	Y	10^{24}	yocto-	y	10^{-24}

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*The kilogram-force (kgf) is $1\,\text{kg} \times g_{\text{std}}$ and the pound-mass (lbm) is $1\,\text{lb} \div g_{\text{std}}$, where $g_{\text{std}} = 9.80665\,\text{m/s}^2 = (9.80665/0.3048)\,\text{ft/s}^2$ is the standard value of the acceleration due to gravity.